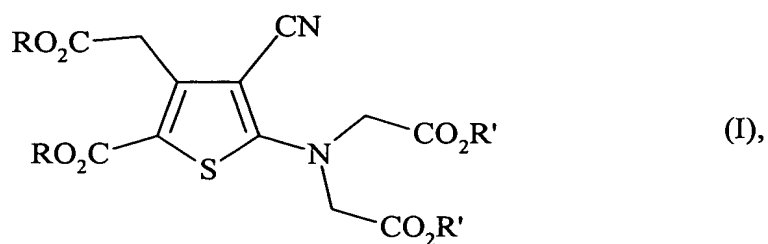


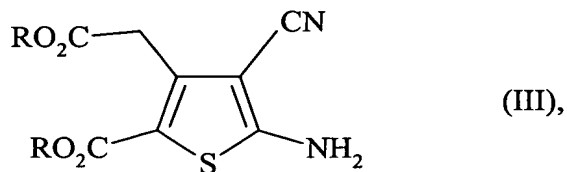
We claim :

1. A process for the industrial synthesis of compounds of formula (I) :



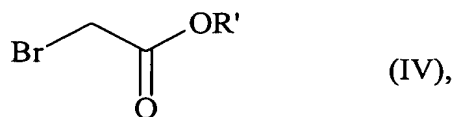
wherein R and R', which are the same or different, each represent linear or branched (C₁-C₆)alkyl,

- 5 wherein a compound of formula (III) :



wherein R is as defined hereinbefore,

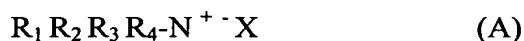
is reacted with a compound of formula (IV) :



- 10 wherein R' is as defined hereinbefore,

in the presence of a catalytic amount of a C₈-C₁₀-type quaternary ammonium compound,
 and in the presence of potassium carbonate,
 at the reflux of an organic solvent;
 5 the reaction mixture is subsequently filtered;
 the mixture is then concentrated by distillation;
 a co-solvent is then added,
 and the reaction mixture is cooled and filtered
 to yield, after drying of the powder thereby obtained, the compound of formula (I),

10 it being understood that a C₈-C₁₀-type quaternary ammonium compound is a compound of formula (A) or a mixture of compounds of formula (A) :



wherein R₁ represents (C₁-C₆)alkyl, R₂, R₃ and R₄, which are the same or different, each represent (C₈-C₁₀)alkyl, and X represents halogen.

- 15 2. Synthesis process according to claim 1 allowing the compound of formula (I), wherein R represents a methyl group and R' represents an ethyl group, to be obtained.
3. Synthesis process according to claim 1 allowing the compound of formula (I), wherein R and R' each represent a methyl group, to be obtained.
4. Process according to claim 1, wherein the C₈-C₁₀-type quaternary ammonium
 20 compound is Adogen 464[®] or Aliquat 336[®].
5. Synthesis process according to claim 1, wherein the amount of potassium carbonate is from 2 to 3 mol per mol of compound of formula (III).
6. Synthesis process according to claim 1, wherein the amount of compound of formula (IV) is from 2 to 3 mol per mol of compound of formula (III).

7. Synthesis process according to claim 1, wherein the initial volume of organic solvent is from 6 to 12 ml per gram of compound of formula (III).

8. Synthesis process according to claim 1, wherein the organic solvent used for the reaction is acetone or acetonitrile.

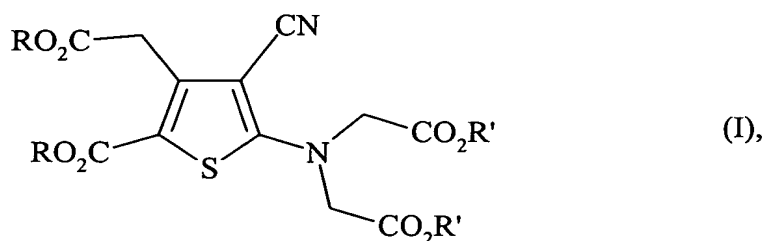
5 9. Synthesis process according to claim 1, wherein the co-solvent used during isolation is methanol.

10. Synthesis process according to claim 1, wherein the compound of formula (I) obtained has a chemical purity greater than 98 %.

10 11. Methyl 5-[bis(2-methoxy-2-oxoethyl)amino]-4-cyano-3-(2-methoxy-2-oxoethyl)-2-thiophenecarboxylate.

12. Methyl 5-[bis(2-ethoxy-2-oxoethyl)amino]-4-cyano-3-(2-methoxy-2-oxoethyl)-2-thiophenecarboxylate.

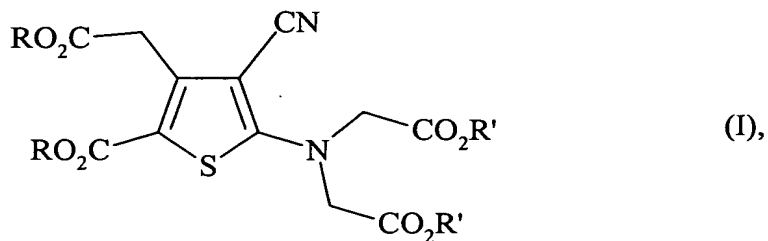
15 13. Process for the synthesis of ranelic acid, its strontium, calcium or magnesium salts and hydrates of the said salts, starting from a compound of formula (I) :



wherein R and R', which are the same or different, each represent linear or branched (C₁-C₆)alkyl,

wherein the compound of formula (I) is obtained by the synthesis process according to claim 1.

14. Process for the synthesis of strontium ranelate and its hydrates, starting from a compound of formula (I) :



wherein R and R', which are the same or different, each represent linear or branched (C₁-C₆)alkyl,

wherein the compound of formula (I) is obtained by the synthesis process according to claim 1.